

## Abstract

In accordance with the invention there is provided a method of treating a human subject to prevent leakage of serum proteins from capillary endothelial junctions during a period of increased capillary permeability. The invention also provides a method for preventing the harmful effects of free radicals on cellular membranes and other organelles. The method comprises administering to a subject an effective amount of a composition comprising at least one polysaccharide selected from the group consisting of hydroxyethyl starch and dextran of varying molecular sizes and at least one member of the group consisting of superoxide dismutase, glutathione peroxidase, catalase, hydroxyethyl rutoside, cyclic adenosine monophosphate and vitamin C. The compositions contain the macromolecules in a molecular size and concentration to effectively stabilize the capillary membrane. The stabilization effect is accomplished by a biophysical/biochemical process due to the adhesiveness and configuration of the macromolecules and because of their size. The treatment is benign as the macromolecules and antioxidants are non-toxic and biodegradable.